RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/766,735A_

Source: _1FW/6_

Date Processed by STIC: _10/20/05_

ENTERED

RAW SEQUENCE LISTING   DATE: 10/20/2005
PATENT APPLICATION: US/10/766,735A   TIME: 10:55:26

Input Set : **A:\14184-039001.txt**
Output Set: **N:\CRF4\10202005\J766735A.raw**

```
 4 <110> APPLICANT: Currie, Mark G.
 5        Mahajan-Miklos, Shalina
 8 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE
 9        TREATMENT OF GASTROINTESTINAL DISORDERS
12 <130> FILE REFERENCE: 14184-039001
14 <140> CURRENT APPLICATION NUMBER: US 10/766,735A
15 <141> CURRENT FILING DATE: 2004-01-28
17 <150> PRIOR APPLICATION NUMBER: US 60/443,098
18 <151> PRIOR FILING DATE: 2003-01-28
20 <150> PRIOR APPLICATION NUMBER: US 60/471,288
21 <151> PRIOR FILING DATE: 2003-05-15
23 <150> PRIOR APPLICATION NUMBER: US 60/519,460
24 <151> PRIOR FILING DATE: 2003-11-12
26 <160> NUMBER OF SEQ ID NOS: 126
28 <170> SOFTWARE: FastSEQ for Windows Version 4.0
30 <210> SEQ ID NO: 1
31 <211> LENGTH: 19
32 <212> TYPE: PRT
33 <213> ORGANISM: Escherichia coli
35 <400> SEQUENCE: 1
36 Asn Ser Ser Asn Tyr Cys Cys Glu Leu Cys Cys Asn Pro Ala Cys Thr
37  1             5               10              15
38 Gly Cys Tyr
41 <210> SEQ ID NO: 2
42 <211> LENGTH: 18
43 <212> TYPE: PRT
44 <213> ORGANISM: Escherichia coli
46 <400> SEQUENCE: 2
47 Asn Thr Phe Tyr Cys Cys Glu Leu Cys Cys Asn Pro Ala Cys Ala Gly
48  1             5               10              15
49 Cys Tyr
52 <210> SEQ ID NO: 3
53 <211> LENGTH: 18
54 <212> TYPE: PRT
55 <213> ORGANISM: Escherichia coli
57 <400> SEQUENCE: 3
58 Asn Thr Phe Tyr Cys Cys Glu Leu Cys Cys Tyr Pro Ala Cys Ala Gly
59  1             5               10              15
60 Cys Asn
63 <210> SEQ ID NO: 4
64 <211> LENGTH: 18
65 <212> TYPE: PRT
66 <213> ORGANISM: Citrobacter freundii
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68 <400> SEQUENCE: 4
69 Asn Thr Phe Tyr Cys Cys Glu Leu Cys Cys Asn Pro Ala Cys Ala Gly
70 1               5                  10                  15
71 Cys Tyr
74 <210> SEQ ID NO: 5
75 <211> LENGTH: 30
76 <212> TYPE: PRT
77 <213> ORGANISM: Yersinia enterocolitica
79 <400> SEQUENCE: 5
80 Gln Ala Cys Asp Pro Pro Ser Pro Pro Ala Glu Val Ser Ser Asp Trp
81 1               5                  10                  15
82 Asp Cys Cys Asp Val Cys Cys Asn Pro Ala Cys Ala Gly Cys
83               20                  25                  30
85 <210> SEQ ID NO: 6
86 <211> LENGTH: 30
87 <212> TYPE: PRT
88 <213> ORGANISM: Yersinia enterocolitica
90 <400> SEQUENCE: 6
91 Lys Ala Cys Asp Thr Gln Thr Pro Ser Pro Ser Glu Glu Asn Asp Asp
92 1               5                  10                  15
93 Trp Cys Cys Glu Val Cys Cys Asn Pro Ala Cys Ala Gly Cys
94               20                  25                  30
96 <210> SEQ ID NO: 7
97 <211> LENGTH: 53
98 <212> TYPE: PRT
99 <213> ORGANISM: Yersinia enterocolitica
101 <400> SEQUENCE: 7
102 Gln Glu Thr Ala Ser Gly Gln Val Gly Asp Val Ser Ser Ser Thr Ile
103 1               5                  10                  15
104 Ala Thr Glu Val Ser Glu Ala Glu Cys Gly Thr Gln Ser Ala Thr Thr
105               20                  25                  30
106 Gln Gly Glu Asn Asp Trp Asp Trp Cys Cys Glu Leu Cys Cys Asn Pro
107          35                  40                  45
108 Ala Cys Phe Gly Cys
109       50
111 <210> SEQ ID NO: 8
112 <211> LENGTH: 16
113 <212> TYPE: PRT
114 <213> ORGANISM: Yersinia kristensenii
116 <400> SEQUENCE: 8
117 Ser Asp Trp Cys Cys Glu Val Cys Cys Asn Pro Ala Cys Ala Gly Cys
118 1               5                  10                  15
120 <210> SEQ ID NO: 9
121 <211> LENGTH: 17
122 <212> TYPE: PRT
123 <213> ORGANISM: Vibrio cholerae
125 <400> SEQUENCE: 9
126 Ile Asp Cys Cys Glu Ile Cys Cys Asn Pro Ala Cys Phe Gly Cys Leu
127 1               5                  10                  15
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Input Set : A:\14184-039001.txt
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128 Asn
131 <210> SEQ ID NO: 10
132 <211> LENGTH: 17
133 <212> TYPE: PRT
134 <213> ORGANISM: Vibrio mimicus
136 <400> SEQUENCE: 10
137 Ile Asp Cys Cys Glu Ile Cys Cys Asn Pro Ala Cys Phe Gly Cys Leu
138 1               5                   10                  15
139 Asn
142 <210> SEQ ID NO: 11
143 <211> LENGTH: 18
144 <212> TYPE: PRT
145 <213> ORGANISM: Escherichia coli
147 <400> SEQUENCE: 11
148 Asn Thr Phe Tyr Cys Cys Glu Leu Cys Cys Asn Pro Ala Cys Ala Pro
149 1               5                   10                  15
150 Cys Tyr
153 <210> SEQ ID NO: 12
154 <211> LENGTH: 13
155 <212> TYPE: PRT
156 <213> ORGANISM: Vibrio cholerae
158 <400> SEQUENCE: 12
159 Ile Asp Cys Cys Glu Ile Cys Cys Asn Pro Ala Cys Phe
160 1               5                   10
162 <210> SEQ ID NO: 13
163 <211> LENGTH: 14
164 <212> TYPE: PRT
165 <213> ORGANISM: Vibrio cholerae
167 <400> SEQUENCE: 13
168 Ile Asp Cys Cys Glu Ile Cys Cys Asn Pro Ala Cys Phe Gly
169 1               5                   10
171 <210> SEQ ID NO: 14
172 <211> LENGTH: 17
173 <212> TYPE: PRT
174 <213> ORGANISM: Vibrio mimicus
176 <400> SEQUENCE: 14
177 Ile Asp Cys Cys Glu Ile Cys Cys Asn Pro Ala Cys Phe Gly Cys Leu
178 1               5                   10                  15
179 Asn
182 <210> SEQ ID NO: 15
183 <211> LENGTH: 17
184 <212> TYPE: PRT
185 <213> ORGANISM: Vibrio mimicus
187 <400> SEQUENCE: 15
188 Ile Asp Arg Cys Glu Ile Cys Cys Asn Pro Ala Cys Phe Gly Cys Leu
189 1               5                   10                  15
190 Asn
193 <210> SEQ ID NO: 16
194 <211> LENGTH: 16
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Input Set : A:\14184-039001.txt
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195 <212> TYPE: PRT
196 <213> ORGANISM: Yersinia enterocolitica
198 <400> SEQUENCE: 16
199 Asp Trp Asp Cys Cys Asp Val Cys Cys Asn Pro Ala Cys Ala Gly Cys
200 1   5   10   15
202 <210> SEQ ID NO: 17
203 <211> LENGTH: 16
204 <212> TYPE: PRT
205 <213> ORGANISM: Yersinia enterocolitica
207 <400> SEQUENCE: 17
208 Asp Trp Asp Cys Cys Asp Val Cys Cys Asn Pro Ala Cys Ala Gly Cys
209 1   5   10   15
211 <210> SEQ ID NO: 18
212 <211> LENGTH: 17
213 <212> TYPE: PRT
214 <213> ORGANISM: Yersinia enterocolitica
216 <400> SEQUENCE: 18
217 Asn Asp Asp Trp Cys Cys Glu Val Cys Cys Asn Pro Ala Cys Ala Gly
218 1   5   10   15
219 Cys
222 <210> SEQ ID NO: 19
223 <211> LENGTH: 16
224 <212> TYPE: PRT
225 <213> ORGANISM: Yersinia enterocolitica
227 <400> SEQUENCE: 19
228 Trp Asp Trp Cys Cys Glu Leu Cys Cys Asn Pro Ala Cys Phe Gly Cys
229 1   5   10   15
231 <210> SEQ ID NO: 20
232 <211> LENGTH: 72
233 <212> TYPE: PRT
234 <213> ORGANISM: Escherichia coli
236 <400> SEQUENCE: 20
237 Met Lys Lys Leu Met Leu Ala Ile Phe Ile Ser Val Leu Ser Phe Pro
238 1   5   10   15
239 Ser Phe Ser Gln Ser Thr Glu Ser Leu Asp Ser Ser Lys Glu Lys Ile
240   20   25   30
241 Thr Leu Glu Thr Lys Lys Cys Asp Val Val Lys Asn Asn Ser Glu Lys
242   35   40   45
243 Lys Ser Glu Asn Met Asn Asn Thr Phe Tyr Cys Cys Glu Leu Cys Cys
244   50   55   60
245 Asn Pro Ala Cys Ala Gly Cys Tyr
246 65   70
248 <210> SEQ ID NO: 21
249 <211> LENGTH: 72
250 <212> TYPE: PRT
251 <213> ORGANISM: Escherichia coli
253 <400> SEQUENCE: 21
254 Met Lys Lys Ser Ile Leu Phe Ile Phe Leu Ser Val Leu Ser Phe Ser
255 1   5   10   15

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256 Pro Phe Ala Gln Asp Ala Lys Pro Val Glu Ser Ser Lys Glu Lys Ile
257             20                  25                  30
258 Thr Leu Glu Ser Lys Lys Cys Asn Ile Ala Lys Lys Ser Asn Lys Ser
259         35                  40                  45
260 Gly Pro Glu Ser Met Asn Ser Ser Asn Tyr Cys Cys Glu Leu Cys Cys
261     50                  55                  60
262 Asn Pro Ala Cys Thr Gly Cys Tyr
263 65                  70
265 <210> SEQ ID NO: 22
266 <211> LENGTH: 71
267 <212> TYPE: PRT
268 <213> ORGANISM: Yersinia enterocolitica
270 <400> SEQUENCE: 22
271 Met Lys Lys Ile Val Phe Val Leu Val Leu Met Leu Ser Ser Phe Gly
272 1               5                  10                  15
273 Ala Phe Gly Gln Glu Thr Val Ser Gly Gln Phe Ser Asp Ala Leu Ser
274             20                  25                  30
275 Thr Pro Ile Thr Ala Glu Val Tyr Lys Gln Ala Cys Asp Pro Pro Leu
276         35                  40                  45
277 Pro Pro Ala Glu Val Ser Ser Asp Trp Asp Cys Cys Asp Val Cys Cys
278     50                  55                  60
279 Asn Pro Ala Cys Ala Gly Cys
280 65                  70
282 <210> SEQ ID NO: 23
283 <211> LENGTH: 54
284 <212> TYPE: PRT
285 <213> ORGANISM: Artificial Sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: Synthetically generated amino terminal leader
289      sequence
291 <400> SEQUENCE: 23
292 Met Lys Lys Ser Ile Leu Phe Ile Phe Leu Ser Val Leu Ser Phe Ser
293 1               5                  10                  15
294 Pro Phe Ala Gln Asp Ala Lys Pro Val Glu Ser Ser Lys Glu Lys Ile
295             20                  25                  30
296 Thr Leu Glu Ser Lys Lys Cys Asn Ile Ala Lys Lys Ser Asn Lys Ser
297         35                  40                  45
298 Gly Pro Glu Ser Met Asn
299     50
301 <210> SEQ ID NO: 24
302 <211> LENGTH: 53
303 <212> TYPE: PRT
304 <213> ORGANISM: Artificial Sequence
306 <220> FEATURE:
307 <223> OTHER INFORMATION: Synthetically generated peptide
309 <400> SEQUENCE: 24
310 Met Lys Lys Ser Ile Leu Phe Ile Phe Leu Ser Val Leu Ser Phe Ser
311 1               5                  10                  15
312 Pro Phe Ala Gln Asp Ala Lys Pro Ala Gly Ser Ser Lys Glu Lys Ile
```

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Input Set : A:\14184-039001.txt
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Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:66; Xaa Pos. 1,2,3,4,5,9,20,21
Seq#:119; Xaa Pos. 1,2,3,4,5,8,9,12,13,14,16,17,19,20,21
Seq#:120; Xaa Pos. 1,2,3,4,5,8,9,16,19,20,21
Seq#:125; Xaa Pos. 4
Seq#:126; Xaa Pos. 4

VERIFICATION SUMMARY   DATE: 10/20/2005
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```
L:883 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:0
M:341 Repeated in SeqNo=66
L:1579 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:119 after pos.:0
M:341 Repeated in SeqNo=119
L:1625 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:120 after pos.:0
M:341 Repeated in SeqNo=120
L:1692 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:125 after pos.:0
L:1710 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:126 after pos.:0
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